

Claims

- [1] Mucosal vaccine adjuvants comprising bacterial flagellins as an active component.
- [2] The mucosal vaccine adjuvants according to claim 1, wherein said flagellins are originated from *Vibrio vulnificus*, *Salmonella typhimurium*, *Listeria monocytogenes*.
- [3] The mucosal vaccine adjuvants according to claim 1, wherein said flagellins are one or more selected from flagellin proteins of *Vibrio vulnificus* encoded by *flaA* set out in DNA SEQ ID NO: 1 or amino acid SEQ ID NO: 2, *flaB* set out in DNA SEQ ID NO: 3 or amino acid SEQ ID NO: 4, *flaF* set out in DNA SEQ ID NO: 5 or amino acid SEQ ID NO: 6, *flaC* set out in DNA SEQ ID NO: 7 or amino acid SEQ ID NO: 8, *flaD* set out in DNA SEQ ID NO: 9 or amino acid SEQ ID NO: 10, and *flaE* set out in DNA SEQ ID NO: 11 or amino acid SEQ ID NO: 12.
- [4] A method of manufacturing immunogen having adjuvanticity by flagellin, which comprises substituting the genes encoding protein antigen epitopes for the genes between the N-terminal regions of FlaA of amino acid sequence 1-191, FlaB of amino acid sequence 1-191, FlaF of amino acid sequence 1-191, FlaC of amino acid sequence 1-191, FlaD of amino acid sequence 1-191 and FlaE of amino acid sequence 1-189; and the C-terminal regions of FlaA of amino acid sequence 277-376, FlaB of amino acid sequence 278-377, FlaF of amino acid sequence 278-377, FlaC of amino acid sequence 285-385, FlaD of amino acid sequence 278-377 and FlaE of amino acid sequence 276-375 among the structural components of *Vibrio vulnificus* set out in SEQ ID NO: 1 to SEQ ID NO: 12.
- [5] The method according to claim 4, wherein said protein antigen epitopes are tetanus toxoid, immunogenic epitopes of influenza virus, immunogenic epitopes of human papilloma virus that induces uterine cervical cancer, pneumococcal antigen PspA or sperm.
- [6] Mucosal vaccine adjuvants comprising the immunogens prepared by the method of claim 4 as an active component.
- [7] The mucosal vaccine adjuvants according to any one of claims 1-3 and 6, wherein said vaccine adjuvants are adjuvants for the anti-toxin vaccine against tetanus toxoid and so on; the live attenuated or killed vaccines against cholera, typhoid fever and so on; the anti-viral vaccine against influenza, SARS and so on; the anti-cancer vaccines against uterine cervical cancer and so on; the anti-sperm contraceptive vaccine; or the recombinant protein or peptide vaccine.